# The Antimicrobial Activity of Medicinal Plant Extracts Against Pathogenic Microorganisms

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**Backgrund & Objectives:** Medicinal plants have been screened for their potential uses as alternative remedies for the treatment of many infectious. In view of increasing resistance to existing antimicrobial agents, herbal drugs are being looked as very important source for discovery of new agents for treating various ailments related to bacterial infections.The purpose of this study was to evaluate the antimicrobial characteristics of alcoholic extracts of *Maclura pomifera*, *Salvia mirzayanii*, *C. officinalilis* against *S. epidermidis, P. aeruoginosa, S. marscens, S. aureus, B. subtilis, E. coli, K. pneumoniae, M. luteus.*

**Methods:** Alcoholic extracts of different parts of herbal strains were prepared using soaking methods and after concentrating, the extracts were dried. Then the concentration of 8000,4000,2000,1000,500,250, 125 µg/ml of alcoholic extracts were used for their antibacterial effects. These concentrations were affected on tested bacteria using agar dilution methods and the antibacterial activity was measured in terms of inhibition zone.

**Results:** The extracts of these plants had antimicrobial activity. The MIC value of *M. pomifera* were found to be 4000 µg/ml aganst *M. luteus*. While S. mirzayanii extract was active against *M. luteus* and *B. subtilis* with MIC 125µg/ml and 500 µg/ml respectively. *C. officinalilis* extract was activeagainst a wide range of bacteria such as *S. epidermidis, E.coli, P. aeruginosa, B. subtilis, M. luteus*. MIC value for first three strains was 8000 µg/ml and for the others was 2000 µg/ml.

**Conclusion:** The results obtained from this study showed that the metanolic extract of *C.officinalis* was significantly active against both gram negative and gram positive bacteria, whereas *M. pomifera* and *S. mirzayanii* were effective on gram positive bacteria which is, probably, because of cell wall construction of them. Although clinical application of medicinal plants seems valuable because of their low side effect, understanding the antibacterial mechanism of these plants seems to be important.

**Keywords:** Medicinal Plants; Alcoholic Extracts; Pathogenic Bacteria